PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	FOR FURTHER	see Notification of	Transmittal of International Search Report	
G0635/7000WO	ACTION	(Form PCT/ISA/22	20) as well as, where applicable, item 5 below.	
International application No.	International filing date (day	//month/year)	(Earliest) Priority Date (day/month/year)	
PCT/US 99/11451	24/05/199	99		
Applicant				
SCHMIDT, KARL B.				
This International Search Report has been according to Article 18. A copy is being tra	n prepared by this Internation ansmitted to the International	al Searching Auth Bureau.	ority and is transmitted to the applicant	
This International Search Report consists It is also accompanied by	of a total of2	sheets.	report.	
Basis of the report				
· '	international search was carri ess otherwise indicated unde	ed out on the bas r this item.	is of the international application in the	
the international search w Authority (Rule 23.1(b)).	as carried out on the basis of	a translation of th	ne international application furnished to this	
was carried out on the basis of the	e sequence listing :		ternational application, the international search	
	nal application in written form		_	
I 💳	filed together with the international application in computer readable form. furnished subsequently to this Authority in written form.			
furnished subsequently to this Authority in computer readble form.				
the statement that the sub international application a	the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.			
the statement that the info	the statement that the information recorded in computer readable form is identical to the written sequence listing has been			
	Certain claims were found unsearchable (See Box I).			
3. Unity of Invention is lac	3. Unity of Invention is lacking (see Box II).			
4. With regard to the title,				
	bmitted by the applicant			
the text is approved as submitted by the applicant. the text has been established by this Authority to read as follows:				
	,	,		
5. With regard to the abstract,				
the text is approved as submitted by the applicant. the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.				
6. The figure of the drawings to be publ			10a-d	
X as suggested by the appli	cant.		None of the figures.	
	because the applicant failed to suggest a figure.			
because this figure better	characterizes the invention.			

NTER — TIUNAL SEARÇII REPURT

PCT/US 99/11451

A. CLASSIF	FICATION OF SUBJECT MATTER G01S17/74 G01S5/16	# #5			
According to	International Patent Classification (IPC) or to both national	classifica	tion and IPC	,	
	SEARCHED	Classifica	,		
	cumentation searched (classification system followed by cl	assificatio	n symbols)		
IPC 7	G01S	.;			
	· · · · · · · · · · · · · · · · · · ·	<u>;</u>			
Documentati	ion searched other than minimum documentation to the exte	ent that su	ich documents are included in the fields se	arched	
		•			
Electronic da	ata base consulted during the international search (name o	data bas	e and, where practical, search terms used)	
			·		
		•			
C. DOCUME	NTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate,	of the rele	evant passages	Relevant to claim No.	
Х	US 4 652 917 A (MILLER JOHN	W)		1,5-7,	
	24 March 1987 (1987-03-24)			10,12	
	column 3, line 48 - line 58 column 7, line 28 - line 35				
		:			
Α	GB 2 082 867 A (ONERA)			1,6,12	
	10 March 1982 (1982-03-10) the whole document				
	the whole document				
			-		
	•				
				·	
		•			
Furth	ner documents are listed in the continuation of box C.	;	χ Patent family members are listed	in annex.	
° Special ca	tegories of cited documents :	1	"T" later document published after the into	ernational filing date	
	ent defining the general state of the art which is not ered to be of particular relevance		or priority date and not in conflict with cited to understand the principle or th	the application but	
"E" earlier o	document but published on or after the international	•	invention "X" document of particular relevance; the	claimed invention	
filing d	int which may throw doubts on priority claim(s) or		cannot be considered novel or canno involve an inventive step when the do	t be considered to	
citation	is cited to establish the publication date of another n or other special reason (as specified)		"Y" document of particular relevance; the cannot be considered to involve an in		
"O" docume other r	ent referring to an oral disclosure, use, exhibition or neans	,	document is combined with one or ments, such combination being obvious		
P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family		family			
Date of the	actual completion of the international search	-	Date of mailing of the international se	arch report	
2	27 October 1999 08/11/1999				
Name and n	Name and mailing address of the ISA Authorized officer				
	European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk				
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Zaccà, F			

	Info	rniacion on patent family mem	PCT/U	S 99/11451
Patent document cited in search repor	t	Publication date	Patent family member(s)	Publication date
US 4652917	Α	24-03-1987	NONE	
GB 2082867	Α	10-03-1982	FR 2488396 A DE 3131335 A US 4472054 A	12-02-1982 03-06-1982 18-09-1984

PAT: COOPERATION TREATY



From the INTERNATIONAL SEARCHING AUTHORITY	PCT NOTIFICATION OF TRANSMITTAL OF	
WOLF, GREENFIELD & SACKS, P.C. Attn. MORRIS, James H. 600 Atlantic Avenue Boston, Massachusetts 02210 UNITED STATES OF AMERICA DOCKETED FEB 2 3 2000 File Folder Docket Entry Decket Cross Off Order Copies Annuties Confirmation	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION (PCT Rule 44.1) Date of mailing (day/month/year) 04/02/2000	
Applicant's or agent's file reference G0635/7003WO SIHOLIO3WO	FOR FURTHER ACTION See paragraphs 1 and 4 below	
International application No. PCT/US 99/11449	International filing date (day/month/year) 24/05/1999	
Applicant GO SENSORS, INC.		
The applicant is hereby notified that the International Search Report has been established and is transmitted herewith. Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46): When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet. Where? Directly to the International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Fascimile No.: (41–22) 740.14.35 For more detailed Instructions, see the notes on the accompanying sheet. 2. The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.		
3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that: the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.		
no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.		
4. Further action(s): The applicant is reminded of the following: Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication. Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).		
Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.		

Name and mailing address of the International Searching Authority	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Eric Walsh

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international pbulication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers;
 claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]:
 "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims];
 - "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

it must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATL COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	(Form PCT/ISA/2	of Transmittal of International Search Report 220) as well as, where applicable, item 5 below.			
G0635/7003W0	ACTION ACTION International filing date (day/month/year) (Earliest) Priority Date (day/month/year)				
nternational application No. International filing date (day/month/year) (Earliest) Priority Date (day/month/year)					
PCT/US 99/11449	24/05/1999				
Applicant					
CO STASODS THE		•			
GO SENSORS, INC.					
This International Search Report has bee according to Article 18. A copy is being tr	n prepared by this International Searching Aut ansmitted to the International Bureau.	hority and is transmitted to the applicant			
This International Search Report consists It is also accompanied by	of a total of sheets. a copy of each prior art document cited in this	s report.			
Basis of the report		to the state of th			
 a. With regard to the language, the language in which it was filed, un 	international search was carried out on the ba less otherwise indicated under this item.	sis of the international application in the			
the international search w Authority (Rule 23.1(b)).	ras carried out on the basis of a translation of	the international application furnished to this			
b. With regard to any nucleotide ar was carried out on the basis of th	id/or amino acid sequence disclosed in the in e sequence listing: onal application in written form.	nternational application, the international search			
1	ernational application in computer readable for	m.			
furnished subsequently to	this Authority in written form.				
	this Authority in computer readble form.				
the statement that the sui	osequently furnished written sequence listing one is the sequence listing of t	does not go beyond the disclosure in the			
the statement that the info furnished	ormation recorded in computer readable form	is identical to the written sequence listing has been			
2. Certain claims were fou	nd unsearchable (See Box I).				
3. Unity of invention is lacking (see Box II).					
4. With regard to the title,	•				
	bmitted by the applicant.				
· · ·	the text has been established by this Authority to read as follows:				
5. With regard to the abstract,					
the text is approved as su	bmitted by the applicant.				
the text has been establis within one month from the	the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.				
6. The figure of the drawings to be published with the abstract is Figure No.					
X as suggested by the appl	cant.	None of the figures.			
	because the applicant failed to suggest a figure.				
because this figure better characterizes the invention.					

PCT/US 99/11449

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01S5/16					
According to International Patent Classification (IPC) or to both national classification and IPC					
	o International Patent Classification (IPC) or to both national classific	auon ano 120			
Minimum de	ocumentation searched (classification system followed by classificat	lion symbols)	· · · · · · · · · · · · · · · · · · ·		
IPC 7	G01S				
Documenta	tion searched other than minimum documentation to the extent that	such documents are included in the fields se	arched		
Electronic d	iata base consulted during the international search (name of data ba	ase and, where practical, search terms used)		
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the re-	levant passages	Relevant to claim No.		
х	US 5 828 447 A (DUCHON PAUL ET / 27 October 1998 (1998-10-27) figures 2,10	AL)	1		
х	US 3 662 180 A (JORGENSEN STIG W 9 May 1972 (1972-05-09)	ET AL)	64		
	abstract figure 1				
Α	US 3 648 229 A (BURROWS ALAN A ET 7 March 1972 (1972-03-07)	Γ AL)	. 6		
Α	FR 2 723 208 A (THOMSON CSF) 1-72 2 February 1996 (1996-02-02) the whole document		1-72		
Furth	ner documents are listed in the continuation of box C.	X Patent family members are listed in	n annex.		
° Special cat	tegories of cited documents :	"T" later document published after the inter			
	nt defining the general state of the art which is not ered to be of particular relevance	or priority date and not in conflict with t cited to understand the principle or the invention			
	ocument but published on or after the international	"X" document of particular relevance; the cla	aimed invention		
"L" docume	nt which may throw doubts on priority claim(s) or is cited to establish the publication date of another	cannot be considered novel or cannot involve an inventive step when the doc "Y" document of particular relevance; the cla	ument is taken alone		
citation	or other special reason (as specified) ont referring to an oral disclosure, use, exhibition or	cannot be considered to involve an involve document is combined with one or mor ments, such combination being obvious	entive step when the re other such docu-		
"P" docume	nt published prior to the international filing date but	in the art. "&" document member of the same patent for			
Date of the a	actual completion of the international search	Date of mailing of the international sear	ch report		
28	3 January 2000	04/02/2000			
Name and m	Jame and mailing address of the ISA . Authorized officer European Patent Office, P.B. 5818 Patentlaan 2				
	NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Ó Donnabháin, C			

Information o.. patent family members

Internation . plication No PCT/US 99/11449

Patent do		Publication date		Patent family member(s)		Publication date
US 5828	3447 A	27-10-1998	FR DE DE EP WO JP	2724013 69505684 69505684 0778958 9607120 10505419	D T	01-03-1996 03-12-1998 20-05-1999 18-06-1997 07-03-1996 26-05-1998
US 3662	180 A	09-05-1972	AU CH DE GB AU	450287 556545 2154915 1371526 3510071	A A A	04-07-1974 29-11-1974 10-05-1973 23-10-1974 03-05-1974
US 3648	229 A	07-03-1972	NONI	<u> </u>		
FR 2723	208 A	02-02-1996	DE GB	3720021 2300988		15-05-1996 20-11-1996

PATENT COOPERATION TRE. Y



,	DOCKETED DOT			
From the INTERNATIONAL SEARCHING AUTHORITY 0				
To:	OAPR 25 2001 NOTIFICATION OF TRANSMITTAL OF			
WOLF, GREENFIELD & SACKS, P.C. File Folder Of State of Samuel Property	OR THE DECLARATION			
600 Atlantic Avenue	OR THE DECLARATION			
Boston, Massachusetts 02210 Docket Cross Of UNITED STATES OF AMERICA Order Copies	(PCT Rule 44.1)			
Annuities	<u> </u>			
Subject to PTA? (YES/NO)				
	Date of mailing			
[MM704/94/01]	day/month/year) 24/04/2001			
Applicant's or agent's file reference	FOR FURTHER ACTION See paragraphs 1 and 4 below			
\$1401/7007W0	nternational filing date			
	day/month/year) 13/11/2000			
Applicant				
ARMSTRONG, Brian, S. et al.				
1. X The applicant is hereby notified that the International Search I	Report has been established and is transmitted herewith.			
Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claims	of the International Application (see Rule 46):			
when the date of transmittal of the				
When? The time limit for filing such amendments is normally 2 months from the accompanying sheet. International Search Report; however, for more details, see the notes on the accompanying sheet.				
Where? Directly to the International Bureau of WIPO 34, chemin des Colombettes				
1211 Geneva 20, Switzerland Fascimile No.: (41–22) 740.14.35				
For more detailed instructions, see the notes on the accompanying sheet.				
The conlicant is bereby notified that no International Search Report will be established and that the declaration under				
2. The applicant is hereby notified that no international scalar report than 20 Article 17(2)(a) to that effect is transmitted herewith.				
3. With regard to the protest against payment of (an) addition	hal fee(s) under Hule 40.2, the applicant is notined that			
the protest together with the decision thereon has been applicant's request to forward the texts of both the prot	transmitted to the International Bureau together with the est and the decision thereon to the designated Offices.			
	u u u u u a assistad de coop de a decision is made			
no decision has been made yet on the protest; the app	licant will be notified as soon as a decision is made.			
4. Further action(s): The applicant is reminded of the following:				
Shortly after 18 months from the priority date, the international application will be published by the International Bureau.				
priority claim, must reach the International Bureau as provided completion of the technical preparations for international publications.	in hules 300/3.1 and 300/3.0, respectively,			
in the state of the internation	at preliminary examination must be filed if the applicant			
wishes to postpone the entry into the national phase until 30 mg	fillis from the priority data (in come come			
Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.				
Name and mailing address of the International Searching Authority	Authorized officer			

Mildred Condron

Form PCT/ISA/220 (July 1998)

European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international polication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]:
 "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
 - "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference FOR FURTHER see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.				
International application No. International filing date (day/month/year) (Earliest) Priority Date (day/month/year)				
PCT/US 00/31184	13/11/2000	12/11/1999		
Applicant				
ARMSTRONG, Brian, S. et a	1.			
This International Search Report has bee according to Article 18. A copy is being tra	n prepared by this International Searching Aut ansmitted to the International Bureau.	hority and is transmitted to the applicant		
This International Search Report consists It is also accompanied by	of a total of sheets. a copy of each prior art document cited in this	s report.		
Basis of the report				
With regard to the language, the language in which it was filed, un	international search was carried out on the balless otherwise indicated under this item.	asis of the international application in the		
the international search v Authority (Rule 23.1(b)).	vas carried out on the basis of a translation of	the international application furnished to this		
was carried out on the basis of th	ie sequence listing :	international application, the international search		
1 L	onal application in written form.			
· -	ernational application in computer readable for	rm.		
· —	o this Authority in written form.	·		
furnished subsequently to this Authority in computer readble form. the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the				
the statement that the su international application	bsequently furnished written sequence listing as filed has been furnished.	does not go beyond the disclosure in the		
		is identical to the written sequence listing has been		
2. Certain claims were for	und unsearchable (See Box I).	+		
3. Unity of invention is la	cking (see Box II).			
4. With regard to the title ,	submitted by the applicant			
the text is approved as submitted by the applicant. the text has been established by this Authority to read as follows:				
Line text that been established				
	•			
5. With regard to the abstract,				
the text is approved as	submitted by the applicant.			
the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.				
6. The figure of the drawings to be pu	blished with the abstract is Figure No.	<u> 10b</u>		
as suggested by the applicant. None of the figures.				
because the applicant fa	because the applicant failed to suggest a figure.			
because this figure bett	er characterizes the invention.			

International application No.

PCT/US 00/31184

INTERNATIONAL SEARCH REPORT

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

In one example, an orientation dependent radiation source (122A,122B) emanates radiation having at least one detectable property that varies as a function of a rotation of the orientation dependent radiation source (122A,122B) and/or an observation distance from the orientation dependent radiation source (e.g., a distance between the source and a radiation detection device). In one example, an image metrology reference target (120) is provided that when placed in a scene of interest facilitates image analysis for various measurement purposes. Such a reference target (120) may include automatic detection means for facilitating an automatic detection of the reference target (120) in an image of the reference target (120) obtained by a camera, and bearing determination means for facilitating a determination of position and/or orientation of the reference target with respect to the camera. In one example, the bearing determination means of the reference target (120) includes one or more orientation dependent radiation sources (122A,122B).

International Application No PCT/US 00/31184

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01C11/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

2-1	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Category °	Challon of document, with indication, where appropriate, or the relevant passages	
X	US 5 936 723 A (ARMSTRONG BRIAN S R ET AL) 10 August 1999 (1999-08-10)	26
Y	column 2, line 42 -column 2, line 58; figures 1-8 column 7, line 57 -column 8, line 27 column 3, line 4 -column 3, line 62	1,35,39, 43,47
Y	US 3 932 039 A (FREY DONALD G) 13 January 1976 (1976-01-13) column 3, line 4 -column 4, line 15; figures 1-9 column 5, line 27 -column 7, line 30	1,35,39, 43,47
X	US 5 719 386 A (HSIEH MICHAEL ET AL) 17 February 1998 (1998-02-17) column 2, line 9 -column 3, line 38; figures 1-10	51

1 1			
Further documents are listed in the continuation of box C.	Patent family members are listed in annex.		
Special categories of cited documents: A' document defining the general state of the art which is not considered to be of particular relevance E' earlier document but published on or after the international filing date C' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) O' document referring to an oral disclosure, use, exhibition or other means P' document published prior to the international filing date but later than the priority date claimed	 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family 		
Date of the actual completion of the international search	Date of mailing of the international search report		
10 April 2001	24/04/2001		
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,	Authorized officer Fourrichon, P		
Fax: (+31-70) 340-3016			

1

International Application No
PCT/US 00/31184

Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3 750 293 A (FORREST R) 7 August 1973 (1973-08-07) column 6, line 19 -column 16, line 51; figures 1-5	1,26
Y	US 3 829 222 A (ASLUND N) 13 August 1974 (1974-08-13) column 2, line 53 -column 8, line 30; figures 1-4	1,26
!		
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information on patent family members

International Application No PCT/US 00/31184

Patent document cited in search report	rt	Publication date	Patent family member(s)	Publication date
US 5936723	Α	10-08-1999	NONE	
US 3932039	Α	13-01-1976	JP 51041544 A	07-04-1976
US 5719386	Α	17-02-1998	NONE	
US 3750293	Α	07-08-1973	DE 2209569 A IT 949775 B	26-04-1973 11-06-1973
US 3829222	Α	13-08-1974	CH 549694 A BE 787446 A DE 2311422 A ES 408550 A FR 2175718 A IT 964255 B NL 7302135 A	31-05-1974 01-12-1972 20-09-1973 01-11-1975 26-10-1973 21-01-1974

PATENT COOPERATION TREA

DOCKETED MAR 2 9 2001



From the INTERNATIONAL SEARCHING AUTHORITY

PCT

Trom the five and	
WOLF, GREENFIELD & SACKS, P.C. Attn. Morris, James H. 600 Atlantic Avenue Boston, Massachusetts 02210 UNITED STATES OF AMERICA Subject to PTA? (YES) NO per BOCKet Entry Docket Cross Order Copies Annuities Confirmation MMO 3 3801	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION (PCT Rule 44.1) Date of mailing (day/month/year) 27/03/2001
Applicant's or agent's file reference \$1401/7008W0	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US 00/31055	International filing date (day/month/year) 13/11/2000
Applicant	
ARMSTRONG, Brian, S.	
1. X The applicant is hereby notified that the International Search Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claim When? The time limit for filing such amendments is normal International Search Report; however, for more definitional Search Report; however, for more definitional Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	ns of the International Application (see Rule 46): ally 2 months from the date of transmittal of the stails, see the notes on the accompanying sheet.
Fascimile No.: (41–22) 740.14.35 For more detailed instructions, see the notes on the account of the account o	
2. The applicant is hereby notified that no International Search Article 17(2)(a) to that effect is transmitted herewith.	h Report will be established and that the declaration under
3. With regard to the protest against payment of (an) addition	onal fee(s) under Rule 40.2, the applicant is notified that:
the protect together with the decision thereon has been	en transmitted to the International Bureau together with the stest and the decision thereon to the designated Offices.
no decision has been made yet on the protest; the ap	plicant will be notified as soon as a decision is made.
4. Further action(s): The applicant is reminded of the following:	
Shortly after 18 months from the priority date, the international a If the applicant wishes to avoid or postpone publication, a notic priority claim, must reach the international Bureau as provided completion of the technical preparations for international public	e of withdrawal of the international application, or of the line Rules 90 <i>bis</i> .1 and 90 <i>bis</i> .3, respectively, before the action.
Within 19 months from the priority date, a demand for internation wishes to postpone the entry into the national phase until 30 m	onths from the priority date (in some Offices even later).
Within 20 months from the priority date, the applicant must perform all designated Offices which have not been elected in the priority date or could not be elected because they are not bound	he demand or in a later election within 19 months from the

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Authorized officer

Christine Voigt

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international polication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- (Where originally there were 15 claims and after amendment of all claims there are 11): "Claims 1 to 15 replaced by amended claims 1 to 11."
- (Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims):
 "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
 "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREAM

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference \$1401/7008W0	FOR FURTHER see Notification (Form PCT/ISA/	of Transmittal of International Search Report 220) as well as, where applicable, item 5 below.
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
PCT/US 00/31055	13/11/2000	12/11/1999
Applicant		
ARMSTRONG, Brian, S.		
This International Search Report has been according to Article 18. A copy is being t	en prepared by this International Searching Au ransmitted to the International Bureau.	thority and is transmitted to the applicant
This International Search Report consist It is also accompanied b	s of a total of sheets. y a copy of each prior art document cited in thi	is report.
Basis of the report		
 With regard to the language, the language in which it was filed, ut 	e international search was carried out on the b nless otherwise indicated under this item.	asis of the international application in the
the international search Authority (Rule 23.1(b)).	was carried out on the basis of a translation of	the international application furnished to this
b. With regard to any nucleotide a was carried out on the basis of t	and/or amino acid sequence disclosed in the he sequence listing:	international application, the international search
	tional application in written form.	
filed together with the in	ternational application in computer readable fo	rm.
furnished subsequently	to this Authority in written form.	
furnished subsequently	to this Authority in computer readble form.	
the statement that the sinternational application	ubsequently furnished written sequence listing as filed has been furnished.	does not go beyond the disclosure in the
the statement that the in furnished	nformation recorded in computer readable form	is identical to the written sequence listing has been
2. Certain claims were fo	ound unsearchable (See Box I).	
3. Unity of invention is la	ocking (see Box II).	•
4. With regard to the title ,		
the text is approved as	submitted by the applicant.	
the text has been estab	lished by this Authority to read as follows:	
5. With regard to the abstract ,		
	submitted by the applicant.	
the text has been estab		ority as it appears in Box III. The applicant may, report, submit comments to this Authority.
	ublished with the abstract is Figure No.	16A
X as suggested by the ap	plicant.	None of the figures.
because the applicant f	ailed to suggest a figure.	
because this figure bett	ter characterizes the invention.	

International Application No PCT/US 00/31055

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01C11/02 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) GO1C G02B IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages Category ° 1,25,43 DE 199 10 107 A (MORITA SEISAKUSHO KYOTO X KK) 16 September 1999 (1999-09-16) column 1, line 58 -column 2, line 10 column 5, line 39 -column 7, line 1; figures 1-12 column 3, line 54 -column 3, line 65 column 3, line 21 -column 3, line 43 US 5 719 386 A (HSIEH MICHAEL ET AL) 1 X 17 February 1998 (1998-02-17) 43,58, column 3, line 4 -column 4, line 64; Υ 67,91,92 figures 1-10 43,58, US 3 871 758 A (LEMELSON JEROME H) Υ 67,91,92 18 March 1975 (1975-03-18) column 2, line 47 -column 15, line 61; figures 1-12 Patent family members are listed in annex. Further documents are listed in the continuation of box C. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention

- filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- document referring to an oral disclosure, use, exhibition or other means
- document published prior to the international filing date but later than the priority date claimed
- cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such document is combined with one or more other such document ments, such combination being obvious to a person skilled in the art.

Date of mailing of the international search report

"&" document member of the same patent family

Date of the actual completion of the international search

15 March 2001

Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

27/03/2001

Authorized officer

Fourrichon, P

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[&]quot;Form PCT/ISA/2"N (second sheet)"(May 1992)

International Application No
PCT/US 00/31055

US 5 566 251 A (HANNA KEITH J ET AL) 15 October 1996 (1996-10-15) column 4, 1ine 18 -column 6, 1ine 63; figures 1-7 EP 0 329 438 A (WIGGINS TEAPE GROUP LTD) 23 August 1989 (1989-08-23) column 4, 1ine 32 -column 12, 1ine 42; figures 1-8 US 3 829 222 A (ASLUND N) 13 August 1974 (1974-08-13) The whole document 1-92	Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT	<u> </u>
15 October 1996 (1996-10-15) column 4, line 18 -column 6, line 63; figures 1-7 EP 0 329 438 A (WIGGINS TEAPE GROUP LTD) 23 August 1989 (1989-08-23) column 4, line 32 -column 12, line 42; figures 1-8 US 3 829 222 A (ASLUND N) 13 August 1974 (1974-08-13)	egory ° Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
23 August 1989 (1989-08-23) column 4, line 32 -column 12, line 42; figures 1-8 US 3 829 222 A (ASLUND N) 13 August 1974 (1974-08-13)	15 October 1996 (1996-10-15) column 4, line 18 -column 6, line 63;	25,43
13 August 1974 (1974-08-13)	23 August 1989 (1989-08-23) column 4, line 32 -column 12, line 42;	25,43
	13 August 1974 (1974-08-13)	1-92

information on patent family members

International Application No
PCT/US 00/31055

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
DE 19910107	Α	16-09-1999	JP	11253433 A	21-09-1999
			FI.	990534 A	12-09-1999
US 5719386	Α	17-02-1998	NONE	· ·	
US 3871758	Α	18-03-1975	US	3900706 A	19-08-1975
			US	3582201 A	01-06-1971
US 5566251	Α	15-10-1996	US	5923791 A	13-07-1999
•			AU	663731 B	19-10-1995
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			DE	69223155 D	18-12-1997
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			EP	0604572 A	06-07-1994
			ES	2110010 T	01-02-1998
			JP	6510893 T	01-12-1994
			WO	9306691 A	01-04-1993
EP 0329438	 А	23-08-1989	 AT	90901 T	 15-07-1993
E1 0023 100	• •		AU	3003589 A	17-08-1989
			CA	1310072 A	10-11-1992
			DE	68907230 D	29-07-1993
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			ËS	2041407 T	16-11-1993
			FΪ	890742 A	17-08-1989
			JP	2005017 A	09-01-1990
			PT	89738 A,B	04-10-1989
			ÜS	4961080 A	02-10-1990
			ZA	8901216 A	27-12-1989
US 3829222		13-08-1974	 CH	549694 A	31-05-1974
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			DE	2311422 A	20-09-1973
			ES	408550 A	01-11-1975
			FR	2175718 A	26-10-1973
			Ϊ́Τ	964255 B	21-01-1974
			41	JU 1-00 0	

PATENT COOPERATION TREAT



From the INTERNATIONAL SEAR	CHING AUTHORITY			
WOLF, GREENFIELD & SACK Attn. MORRIS, James H. 600 Atlantic Avenue Boston, Massachusetts (UNITED STATES OF AMERIC Subject to PTA? (E per bocket/	File Halds ECB Pocket Entr			
Applicant's or agent's file reference \$1401/7005W0	MAR 1 5 2001	FOR FURTHER ACTION See paragraphs 1 and 4 below		
International application No. PCT/US 00/31118		International filing date (day/month/year) 13/11/2000		
ARMSTRONG, Brian S.				
1. X The applicant is hereby notified that the International Search Report has been established and is transmitted herewith. Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46): When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet. Where? Directly to the International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Fascimile No.: (41–22) 740.14.35 For more detailed instructions, see the notes on the accompanying sheet. 2. The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith. 3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that: the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.				
no decision has been m	ade yet on the protest; the	applicant will be notified as soon as a decision is made.		
Shortly after 18 months from the properties of the applicant wishes to avoid or priority claim, must reach the Intecompletion of the technical preparation of the technical preparation of the priority wishes to postpone the entry into Within 20 months from the priority	postpone publication, a nernational Bureau as provide the provided in the provided in the provided in the pational phase until 30 date, the applicant must provided in the pro	al application will be published by the International Bureau. otice of withdrawal of the international application, or of the ded in Rules 90 <i>bis</i> .1 and 90 <i>bis</i> .3, respectively, before the		
priority date or could not be electe	ed because they are not be	ound by Chapter II.		

European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

Mildred Condron

Form PCT/ISA/220 (July 1998)

N. (ES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international politication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

Notes to Form PCT/ISA/220 (first sheet) (January 1994)

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]:
 "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
 "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide

Notes to Form PCT/ISA/220 (second sheet) (January 1994)

PATENT COOPERATION TREAT "

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	(Form	otification of Transmittal of Inter PCT/ISA/220) as well as, wher	
S1401/7005WO	ACTION		
International application No.	International filing date (day/mon	h/year) (Earliest) Priority	Date (day/month/year)
PCT/US 00/31118	13/11/2000	. 12	2/11/1999
Applicant			
ARMSTRONG, Brian S.			
This International Search Report has been according to Article 18. A copy is being tra			ted to the applicant
This International Search Report consists X It is also accompanied by	of a total of3 shall sha	eets. cited in this report.	
Basis of the report			
	international search was carried ou ess otherwise indicated under this		al application in the
the international search w Authority (Rule 23.1(b)).	as carried out on the basis of a trar	slation of the international appl	ication furnished to this
b. With regard to any nucleotide an was carried out on the basis of the	d/or amino acid sequence disclose sequence listing: nal application in written form.	ed in the international applicati	on, the international search
filed together with the inte	rnational application in computer re	adable form.	
furnished subsequently to	this Authority in written form.		
	this Authority in computer readble		
the statement that the sub international application a	sequently furnished written sequer s filed has been furnished.	ce listing does not go beyond t	he disclosure in the
the statement that the info furnished	ormation recorded in computer reac	able form is identical to the writ	ten sequence listing has been
2. Certain claims were fou	nd unsearchable (See Box I).		
3. Unity of invention is lac	king (see Box II).		
4. With regard to the title ,		·	
X the text is approved as su	bmitted by the applicant.		
the text has been establis	hed by this Authority to read as foll	ows:	•
5. With regard to the abstract,			
The text is approved as su	bmitted by the applicant.		
the text has been establis	hed, according to Rule 38.2(b), by a date of mailing of this international	his Authority as it appears in B search report, submit commer	ox III. The applicant may, its to this Authority.
6. The figure of the drawings to be publ	ished with the abstract is Figure No	. 6 _	
$oxed{X}$ as suggested by the appli	cant.		None of the figures.
because the applicant fail	ed to suggest a figure.		
because this figure better	characterizes the invention.		

Form PCT/ISA/210 (first sheet) (July 1998)

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01C11/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\label{lem:minimum} \begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{G01C} & \mbox{G02B} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 566 251 A (HANNA KEITH J ET AL)	1-16,25,
	15 October 1996 (1996-10-15)	26
Υ	column 3, line 1 -column 3, line 22	17-23
	column 9, line 43 -column 12, line 16;	
	claim 4; figures 2-7	į
	column 4, line 33 -column 4, line 49	
X	US 5 850 352 A (JAIN RAMESH ET AL)	27,30-32
^	15 December 1998 (1998-12-15)	27,30 32
	column 10, line 64 -column 14, line 34	
	claims 1,7-9,18,20; figures 1A-17	
Α	column 43, line 4 -column 44, line 17	13-16,
		18,19,
		25,26
.,	column 35, line 1 -column 35, line 51	00.00
Y	column 19, line 11 -column 20, line 42	28,33,
		34,37-41
	-/	
	-/	

Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filling date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filling date but later than the priority date claimed	 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 5 March 2001	Date of mailing of the international search report 12/03/2001
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Fournichon, P

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International Application No
PCT/US 00/31118

Category	uation) DOCUMENTS CONSIDERED TO BE RELEVANT	Relevant to claim No.
ategory ^c	Citation of document, with indication, where appropriate, of the relevant passages	Helevant to claim No.
Y	US 5 299 253 A (WESSELS BARRY W) 29 March 1994 (1994-03-29) column 2, line 47 -column 9, line 51; figures 1A,1B	17-23, 28,33, 34,37-41
A '	US 5 729 471 A (WAKIMOTO KOJI ET AL) 17 March 1998 (1998-03-17) The whole document	1-26
A	US 3 750 293 A (FORREST R) 7 August 1973 (1973-08-07) The whle document	28-41

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PCT/US 00/31118

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